

Factors Influencing the Participation in IIUM Zero Single-Use Plastic Campaign

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ABSTRACT

IIUM Zero Single-Use Plastic Campaign was launched in February 2019, requiring everyone in IIUM not to use plastics including plastic straws, plastic bags, and plastic food containers. As such, this study attempted to gauge the IIUM community's reception towards the Zero Single-Use Plastic Campaign. The objectives of this study are: (1) to determine the level of awareness, perception, attitude, readiness, and behaviour towards the Zero Single-Use Plastic Campaign; (2) to analyze the relationship among awareness, perception, attitude, readiness, and behaviour in the Zero Single-Use Plastic Campaign; and (3) to find out the best predictor of community behaviour towards such campaign. The study tested the theory of planned behaviour and employed a quantitative research design using the survey method with the questionnaire as its research instrument for data collection. A total of 398 respondents participated in the study. The results of the study show that there is a high level of awareness, perception, attitude, readiness, and behaviour towards the Zero Single-Use Plastic Campaign. Also, there are positive and significant relationships between the factors and behaviour (usage). Readiness is the best predictor of the zero single-use plastic usage. All the hypotheses are supported. Therefore, it can be concluded that the IIUM campus community supports the campaign. Hence, the theory of planned behaviour holds true and is supported by this study.

Keywords: *Attitude, awareness, behaviour, perception, readiness towards the campaign.*

INTRODUCTION

Background of the Study

The focus of this research is to study the effects of the Zero Single-Use Plastic Campaign (ZSUPC) on the International Islamic University Malaysia (IIUM) community at the Gombak Campus. The campaign was launched in February 2019, requiring that everyone in IIUM not to use plastic, which includes plastic straws, plastic bags, and plastic food containers. The purpose of the campaign is to answer the call of Selangor State 6-year plan towards zero plastic straw by 2025 (StarMetro, July 27, 2019).

Malaysia is conscious of plastic pollution that has been affecting the environment not only in Malaysia but also around the world. Hence, many initiatives have been taken to help solve this issue. For instance, in Malaysia, the single-use plastic campaign was implemented in the 1970s, requiring the people to use a single-use plastic bag to carry the items that they bought (Shiang & Wok, 2017). The campaign aims to reduce plastic usage among Malaysians so that pollution can eventually be reduced. Subsequently, in 1993, the Malaysian Government launched a recycling program, declaring the 11th of November as the National Recycling Day for Malaysia (Wok & Ithnin, 2018).

However, according to Wok, Harith, Khalid, Rashid, Ithnin and Alaklouk (2018), although many educational and awareness programs have been implemented involving many types of target audiences such as businesses, industries, schools, and community, these

initiatives have failed to educate, create awareness, and encourage people to participate and cooperate so that this issue can be solved. Moreover, youngsters were found to have low participation in recycling and other environmental campaigns, which shows that the government has been unsuccessful in educating and creating awareness among the youngsters about the importance of protecting nature (Wok et al., 2018).

IIUM is also aware and conscious about the importance of reducing plastic waste in order to preserve its environment. Therefore, one of the initiatives taken by IIUM to eradicate the habit of using plastic among IIUM community is the introduction of the four R's (Refuse, Reduce, Reuse, Recycle) through the IIUM Zero Single-Use Plastic Campaign (ZSUPC).

Problem Statement

Industrialization and urbanization have become the top contributors to plastic pollution due to a large number of plastic wastes that are still increasing in Malaysia (Wok et al., 2018). Many plastic factories continue to produce countless plastic products, which are used by many people because they are convenient, cheap, and easy to use. However, the non-biodegradable nature of plastic has caused a considerable negative impact on the environment, which is also harmful to animals.

Many people still throw their plastic waste into the ocean, causing substantial harm and even death to marine life, thus affecting the ecosystem. This is an important issue because some of the marine lives involved are among the endangered species that need to be protected. These animals might eat the plastic, which looks like their food, causing indigestion or strangulation and ultimately, death (Berita Harian, 2019).

The launching of the IIUM Zero Single-Use Plastic Campaign (ZSUPC) as a response to the issue has resulted in a decrease in plastic usage among the IIUM community. Part of the IIUM community accepted the campaign positively by participating and refusing to take plastic bags and straws. They bring their own metal straw, food container, or their own bag to carry their purchased goods. However, some people think that it is somewhat troublesome to get used to not using plastic bags and straws within a short time. This is because people have gotten used to using those plastic products in their daily lives (Shiang & Wok, 2017).

In response to this problem, this research paper seeks to determine the effect of the campaign on the behaviour of the IIUM community. It also investigates the factors influencing the effectiveness of the campaign.

Research Objectives

The main objective of this study is to find out the effects of the IIUM Zero Single-Use Plastic Campaign (ZSUPC) on the IIUM community in Gombak Campus. This study is guided by the following specific objectives:

1. To determine the level of awareness, perception, attitude, readiness, and behaviour among the IIUM community towards the ZSUPC;
2. To analyze the relationship among awareness, perception, attitude, readiness, and behaviour among the IIUM community on the ZSUPC; and
3. To determine the best predictor of community behaviour towards such a campaign.

Significance of the Study

The findings from this study will provide ways for IIUM to reinforce the ZSUPC better. By comprehending the community's awareness, perception, attitude, readiness, and behaviour, it can help IIUM management in providing better ways to make the campaign more effective,

thus achieving its objectives. The research also hopes to help the campaign in suggesting a new policy that can be accepted by the IIUM community.

From the findings, it is hoped that problems and issues faced in this campaign can be highlighted and policymakers can take actions upon them by providing solutions to the problems or amending the existing policy.

Also, this research can contribute to the development of human behaviour towards the environment by helping to raise awareness among the IIUM community members concerning plastic usage, and this will affect their behaviour positively. In addition, the standing of the campaign can chart possible positive acceptance from the community. Furthermore, the research can provide a further understanding of the selected theory of planned behaviour.

LITERATURE REVIEW

Behaviour Towards The Campaign

When people are willing to change their behaviour, the process of learning a new behaviour needs to be supported. The behaviour of people will change if they are provided with the benefits of changing their behaviour. Also, a positive message method influences the behaviour of users toward adopting the campaign.

To help solve the problem with plastic, the Malaysian government through the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) has documented a strategic and timely book as a guideline for the period of 2018–2030 to plan and strategize its future concerning single-use plastic. The vision stated is “towards zero single-use plastics for a cleaner and healthier environment in Malaysia by 2030”. The plan and the campaign can be done single-handedly because it has six principles: (1) shared responsibility, (2) sustainable development, (3) precautionary principle, (4) participatory, (5) good governance, and (6) living document. All parties must be involved openly and it is to be done in a transparent manner with everyone accountable for its implementation as it is the Malaysian government’s national priority. This is due to the severity of plastic pollution in Malaysia; low recycling rates of plastic waste; absence of environmentally friendly, cost-effective alternatives; and absence of a uniform policy framework. It is thought that this “*Single-use plastics: A roadmap for sustainability*” provides the best solution for the country’s pollution problem. The challenges for Malaysians are many folds: (a) lack of awareness, (b) low recycling rate, (c) biodegradability and cost of current alternatives to plastic, (d) enforcement, and (e) integrated waste management. Above all, the success of this strategic plan or roadmap requires all Malaysians to be part of the journey towards a sustainable and bright future.

Behaviour and Awareness

The awareness of an individual towards certain things affects the individual’s behaviour. If people are aware of certain things such as the benefits or advantages of something, they will change their behaviour in order to obtain a better result. For example, if people are aware of any campaign, their level of behaviour could be changed for the better if they can see the benefits of the campaign.

Knowledge and awareness are prerequisites for a change in behaviour but not necessarily sufficient, and this is why it has to be implemented in combination with other influencing strategies (Afroz, Rahman, Masud, & Akhtar, 2017). Zen, Ahamad, and Omar (2013) studied awareness as one of the variables in a no plastic campaign, and they recorded

that behavioural change occurred in their respondents for their respective households. Asmuni, Hussin, Khalili, and Zain (2015) also found that awareness of the program resulted in high participation in a zero-plastic campaign.

Behaviour and Perception

The perception of certain things can lead to a different result in an individual's behaviour. If people think that the information is useful and can benefit them, they will automatically change their behaviour towards adopting it. Similarly, if people think that a campaign can produce benefits and some good towards the environment, they will change their behaviour because it can also make their lives better and healthier. Moreover, a campaign should use simple and consistent rules of behaviour that people can follow. In this way, people's perception will lead to better acceptance of the suggested behaviour. Hopefully, positive thought leads to positive behaviour (Wok et al., 2018).

Behaviour and Attitude

Attitude is defined as a person's reaction through the soul, whose behaviour can become a common habit (Stanford Encyclopedia of Philosophy, 2019). The positive attitude of people can also change their behaviour positively. This is because attitude determines individuals' actions (Wan et al., 2012; Wok et al., 2018). They found that their respondents essentially improved recycling management systems while at the same time cultivating and developing pro-recycling attitudes and behaviours.

Behaviour and Readiness

The readiness of individuals towards certain things can have some effect on their behaviour because if the individuals are ready to do something, they will also change their behaviour accordingly since they are prepared for it, mentally and physically. Another issue is the technology-readiness (TR) concept. Son and Han (2011) indicate that TR affects the intention of continued use of new technology by focusing on post-adoption behaviour. Similarly, if the campaign is broadcasted using technology with reminders, its chance of adoption is high.

The Theory of Planned Behaviour

The theory of planned behaviour (TPB) was found by Ajzen in 1988 (Ajzen, 1991). It is based on the theory of reasoned action in 1980 which was used to predict an individual's intention to engage in a behaviour at a specific time and place. Moreover, the theory was intended to explain all behaviours over which people have the ability to strive towards self-control. TPB suggests that a person's behaviour is determined by his or her intention to perform the behaviour and that this intention, in turn, acts as a function of his or her attitude towards the behaviour and his or her subjective norm.

There are three kinds of consideration in human actions: (a) behavioural belief (belief about the likely consequences of the behaviour), (b) normative belief (belief about the normative expectation of others), and (c) control belief (belief about the presence of factors) that may facilitate or impede the performance of the behaviour (Ajzen, 1991).

For this study, awareness, perception, attitude, and readiness are related to the behaviour that may change depending on the level of those variables. Thus, the theory of planned behaviour is applied in this study.

Conceptual Framework

Based on the literature review and the theoretical framework, the conceptual framework of the study is virtualized (Figure 1).

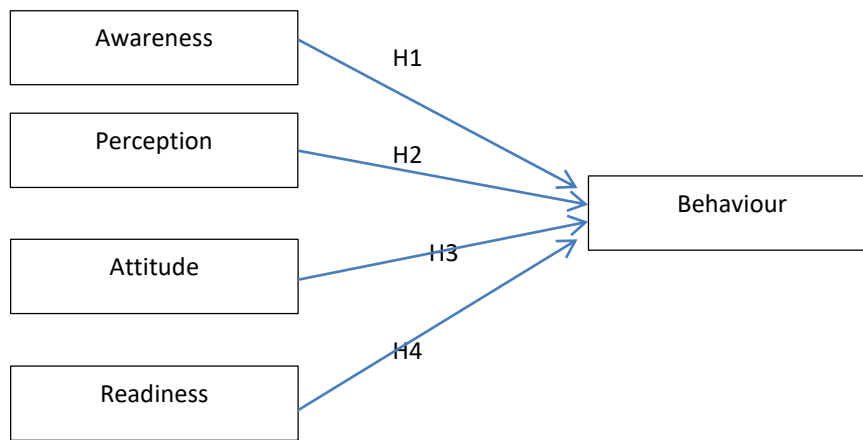


Figure 1: Relationship between awareness, perception, attitude and readiness with behaviour towards IZSUP campaign

Hypotheses of the Study

Based on the literature review and the underlying principles of the theory, the following hypotheses are formulated:

H1: There is a positive relationship between awareness and the behaviour of the IIUM community towards IIUM Zero Single-Use Plastic Campaign.

H2: There is a positive relationship between perception and the behaviour of the IIUM community towards IIUM Zero Single-Use Plastic Campaign.

H3: There is a positive relationship between attitude and the behaviour of the IIUM community towards IIUM Zero Single-Use Plastic Campaign.

H4: There is a positive relationship between readiness and the behaviour of the IIUM community towards IIUM Zero Single-Use Plastic Campaign.

METHODOLOGY

Method

This study employed a quantitative research design using the survey method with the questionnaire as its research instrument for data collection. A total of 398 respondents from the IIUM Gombak Campus community participated in the study. They were selected using the stratified random sampling procedure based on background categories: students, lecturers, administrative staff, and vendors. Data were collected over two weeks from April 12 to April 26, 2019.

The questionnaire consisted of seven sections: Section 1 - background information, Section 2 - awareness of IIUM ZSUPC, Section 3 – the perception of IIUM ZSUPC, Section 4 – the attitude of the IIUM community towards IIUM ZSUPC, Section 5 - readiness of the IIUM community towards IIUM ZSUPC, Section 6 - behaviour of the IIUM community towards IIUM ZSUPC, and Section 7 - suggestion and recommendation.

The measurement of **Awareness** of IIUM ZSUPC consisted of nine items, for example, “I am aware of the date when this campaign was launched”. **Perception** of IIUM ZSUPC consisted of 10 items, for example, “I think the Zero Single-Use Plastic Campaign has a good

reputation". The **attitude** of the IIUM community towards IIUM ZSUPC was measured using 12 items, for example, "I support shops and cafes that abolish plastic bags usage". The **readiness** of the IIUM community towards IIUM ZSUPC was measured using 10 items, for example, "I am ready to wash the re-used container every time I use it". The **behaviour** of the IIUM community towards IIUM ZSUPC consisted of 10 items, for example, "I spend my money for a set of metal straws". All of these variables were measured using a five-point Likert scale indicated as 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = agree, and lastly, 5 = strongly agree.

All the variables were subjected to validity and reliability test. Only face validity was used for this study. According to Bolarinwa (2015), face validity can be accepted when an expert on the specific research field reviews the research instrument and then endorses the questionnaire concerned. The expert can measure the characteristic or trait of interest by reviewing the questionnaire. The expert can agree that the test is a valid measure of the construct when the expert looks at the items in the questionnaire. Each of the measuring items is evaluated by the expert, and the expert needs to know whether it matches any given domain of the construct. In this research, all the items in the questionnaire were reviewed by an expert for both the pilot study and actual study.

Cronbach's alpha was used to measure the reliability of items in the questionnaire. Table 1 shows that the questionnaire items are reliable as the alpha values for each variable are greater than .70 for both the pilot and actual study. All the variables are reliable for the actual study with Cronbach's alpha for awareness ($\alpha = .850$), perception ($\alpha = .903$), attitude ($\alpha = .846$), readiness ($\alpha = .929$), and behaviour ($\alpha = .929$).

Table 1: Reliability values for selected variables in the study

Section	Variable	Number of Items	Cronbach's Alpha	
			Pilot Study (N = 50)	Actual Study (N = 398)
2	Awareness of the IIUM community towards IIUM ZSUPC	9	.879	.850
3	Perception of the IIUM community towards IIUM ZSUPC	10	.950	.903
4	Attitude of the IIUM community towards IIUM ZSUPC	12	.908	.846
5	Readiness of the IIUM community towards IIUM ZSUPC	10	.953	.929
6	Behaviour of the IIUM community towards IIUM ZSUPC	10	.916	.890

The data were analyzed using Statistical Package for Social Sciences (SPSS WIN 16) for both descriptive and inferential statistics. The descriptive statistics used are frequency, percentage, mean, and standard deviation. The inferential statistics used for the study are one-sample *t*-test, correlation, and regression.

RESULTS AND DISCUSSION

Demographic Information

A total of 398 respondents participated in the study (Table 2). Two-thirds of the respondents are females (67.1%) while the rest (32.9%) are males. Almost all of them are Malaysians (90.7%) with only 9.3% non-Malaysians. Almost three-quarters of the respondents (74.9%) are between 21 and 30 years old. Only 9.5% are less than 20 years old, while 8.1% of them

aged between 31-40 years old and the rest (7.5%) is 40 years old and older. The majority of the respondents (79.9%) are students, followed by the administrative staff (13.3%), lecturers (5.8%), and finally the vendors (1.0%).

Table 2: Demographic information of the respondents

Background Information (N = 398)	Category	Frequency	Percentage (%)
Gender	Male	131	32.9
	Female	267	67.1
Nationality	Malaysian	361	90.7
	Non-Malaysian	37	9.3
Age (years old)	Less than 20	38	9.5
	21–30	298	74.9
	31–40	32	8.1
	41 and above	30	7.5
Category	Student	318	79.9
	Lecturer	23	5.8
	Administrative Officer	53	13.3
	Vendor	4	1.0

Awareness of IIUM Zero Single-Use Plastic Campaign

The results in Table 3 show that the awareness of the respondents towards IIUM ZSUPC is positive ($t = 16.700, p = .000$). About three-quarters of the respondents have noticed the changes that have occurred in IIUM (77.6%). Their friends are also aware of the campaign (76.5%), and they themselves are aware of the commitment to the campaign (75.3%). In addition, they notice that the lecturers (73.2%) are also aware of the campaign; the amount of plastics used by the IIUM community is decreasing after the campaign was launched (72.9%), and the IIUM staff members are aware of the campaign (70.0%). This is because there are posters about the campaign on the IIUM webpage (69.1%) and the updates on social media (68.0%). A substantial number of them know the date this campaign was launched (64.3%), indicating that their awareness of the date does affect their overall participation in the campaign. It can be implied that the IIUM community has a high level of awareness on the IIUM ZSUPC and they are positive towards the campaign. Hence, awareness of the campaign is a good indication of materializing the need for being an eco-friendly community.

Table 3: Awareness of IIUM zero single-use plastic campaign

No.	Awareness of IIIUM Zero Single-Use Plastic Campaign	M*	SD	%	t**	p
1	I notice the changes that have occurred in IIUM.	3.882	0.946	77.6	18.594	.000
2	I notice that my friends are aware of this campaign too.	3.824	0.925	76.5	17.774	.000
3	I am aware of the commitment to this campaign.	3.766	0.888	75.3	17.211	.000
4	I notice that IIUM lecturers are aware of this campaign.	3.661	0.972	73.2	13.560	.000
5	I notice that the number of plastics used by the IIUM community has decreased after the campaign was launched.	3.646	1.061	72.9	12.140	.000
6	I notice that IIUM staff members are aware of this campaign.	3.498	1.030	70.0	9.587	.000
7	I notice the posters about this campaign on the IIUM Webpage.	3.457	1.163	69.1	7.846	.000

8	I notice the updates about this campaign on social media.	3.400	1.174	68.0	6.787	.000
9	I am aware of the date when this campaign was launched.	3.214	1.255	64.3	3.396	.000
Overall Awareness (N = 398)		3.594	0.71	71.9	16.700	.000

* 5-point Likert scale: 1 = strongly disagree (1–20%), 2 = disagree (21–40%), 3 = slightly agree (41–60%), 4 = agree (61–80%), 5 = strongly agree (81–100%)

** Test value = 3

Perception of IIUM Zero Single-Use Plastic Campaign

The respondents' perception of the campaign is positive (Table 4) with $t = 23.097$, $p = .000$. The majority of the respondents think that this campaign is good (83.4%), can improve the environmental condition (82.9%), and can reduce the usage of plastics (80.8%). More than seven in ten respondents (79.7%) think that the campaign is relevant, is useful (78.8%), has a good reputation (75.0%), is practical (74.4%), and has influenced their behaviour towards plastic usage (73.0%). They also have positive thoughts of the campaign as they think that the campaign is not troublesome to the community (68.6%) and is successful (68.5%). On the whole, the IIUM community has a high level of perception towards IIUM ZSUPC. Therefore, having a positive perception does influence the success of the campaign.

Table 4: Perception of IIUM zero single-use plastic campaign

No.	Perception of IIUM Zero Single-Use Plastic Campaign	<i>M*</i>	<i>SD</i>	%	<i>t**</i>	<i>P</i>
1	I think the Zero Single-Use Plastic Campaign is good.	4.168	0.947	83.4	24.624	.000
2	I think the Zero Single-Use Plastic Campaign will improve the environmental condition.	4.146	0.880	82.9	25.969	.000
3	I think the Zero Single-Use Plastic Campaign can reduce the use of plastic.	4.038	0.945	80.8	21.910	.000
4	I think the Zero Single-Use Plastic Campaign is relevant.	3.987	0.948	79.7	20.775	.000
5	I think the existence of metal straws is useful.	3.940	0.999	78.8	18.757	.000
6	I think the Zero Single-Use Plastic Campaign has a good reputation.	3.749	0.924	75.0	16.168	.000
7	I think the Zero Single-Use Plastic Campaign is practical to the IIUM community.	3.721	1.034	74.4	13.920	.000
8	I think the Zero Single-Use Plastic Campaign has influenced my behaviour.	3.648	1.027	73.0	12.592	.000
9	I think the Zero Single-Use Plastic Campaign is not troublesome to the community.	3.430	1.092	68.6	7.848	.000
10	I think the Zero Single-Use Plastic Campaign is successful.	3.425	0.949	68.5	8.930	.000
Overall Perception (N = 398)		3.825	0.713	76.5	23.097	.000

* 5-point Likert scale: 1 = strongly disagree (1–20%), 2 = disagree (21–40%), 3 = slightly agree (41–60%), 4 = agree (61–80%), 5 = strongly agree (81–100%)

** Test value = 3

Attitude Towards IIUM Zero Single-Use Plastic Campaign

The positive attitude of the respondents towards IIUM ZSUPC is reflected by $t = 22.308$ ($p = .000$) as presented in Table 5. Majority of the respondents agree that this campaign will effectively help in preserving nature (84.4%) and everyone will cooperate in reducing plastic usage (83.2%). They also believe that it will reduce plastic pollution (82.3%) when people use eco-friendly products (81.8%); and that the ban on plastic should be implemented globally (80.7%). In addition, the respondents are willing to reuse and bring their own bag for shopping (76.7%), support shops and cafés that abolish plastic bag usage (76.5%), spread awareness about the campaign to friends and family (76.1%), and pay extra for biodegradable disposable

bags (73.6%). Such attitudes will definitely make the campaign successful. Furthermore, some respondents prefer plastic products to be banned (68.9%) and prefer not to take plastic bags when buying something (65.0%). But a handful of them still likes using plastic straws when buying their drinks at cafés (60.8%); however, the liking for using the straw is not significant. The overall attitudes of 75.7% do create a conducive environment for the success of the campaign in the future. With a positive and high level of attitudes towards IIUM ZSUPC, the campaign is thus well supported by the community to help in maintaining a healthy atmosphere within campus.

Table 5: Attitude towards IIUM zero single-use plastic campaign

No.	Attitude Towards IIUM Zero Single-Use Plastic Campaign	<i>M</i> *	<i>SD</i>	%	<i>t</i> **	<i>P</i>
1	I hope the campaign will effectively help in preserving nature.	4.219	0.881	84.4	27.601	.000
2	I hope everyone will give cooperation in reducing plastic usage.	4.161	0.902	83.2	25.646	.000
3	I believe this campaign can reduce plastic pollution.	4.113	0.889	82.3	24.972	.000
4	I like people who use eco-friendly products.	4.088	0.872	81.8	24.888	.000
5	I like if a ban on plastics is implemented globally.	4.035	0.93	80.7	22.202	.000
6	I am willing to reuse and bring my own bags for shopping.	3.834	1.015	76.7	16.395	.000
7	I support shops and cafés that abolish plastic bag usage.	3.825	0.995	76.5	16.574	.000
8	I feel like spreading awareness about the campaign to my friends and family.	3.804	0.913	76.1	17.574	.000
9	I am willing to pay extra for biodegradable disposable bags.	3.678	1.091	73.6	12.401	.000
10	I prefer plastic products to be banned.	3.445	1.100	68.9	8.066	.000
11	I prefer not to take plastic bags when buying something.	3.251	1.130	65.0	4.436	.000
12	I like using a plastic straw when I buy drinks at a café.	3.040	1.187	60.8	0.676	.399
Overall Attitude (N = 398)		3.784	0.701	75.7	22.308	.000

* 5-point Likert scale: 1 = strongly disagree (1–20%), 2 = disagree (21–40%), 3 = slightly agree (41–60%), 4 = agree (61–80%), 5 = strongly agree (81–100%)

* Test value = 3

Readiness Towards IIUM Zero Single-Use Plastic Campaign

Table 6 shows the overall positive level of readiness of the respondents towards IIUM ZSUPC ($t = 18.191, p = .000$) and it is significant, too. The majority of the respondents accept the idea of using reusable bags/degradable plastic bags when shopping (80.2%) and they are ready to buy eco-friendly products (80.0%). They are also ready to support the ZSUPC in IIUM (77.1%), to get involved with the ZSUPC (76.1%), to wash the metal straw every time using it (74.3%), to wash the re-useable container every time using it (74.1%), to ban plastics (72.6%), to bring a re-useable container to put their food (72.4%), and to bring and use a metal straw everywhere they go (71.8%). They are also ready to bring a heavy bag due to the re-useable container (68.2%). Their sacrifice for the environment is much appreciated. Hopefully, the IIUM ZSUPC will attain its target and the activities will become the habits of the campus community to sustain a clean surrounding.

Table 6: Readiness towards IIUM zero single-use plastic campaign

No.	Readiness Towards IIUM Zero Single-Use Plastic Campaign	<i>M*</i>	<i>SD</i>	%	<i>t**</i>	<i>P</i>
1	I am ready to accept the idea of using a re-useable bag/anti-plastic bag when I go shopping.	4.008	0.899	80.2	22.354	.000
2	I am ready to buy eco-friendly products.	3.998	0.879	80.0	22.630	.000
3	I am ready to support the Zero Single-Use Plastic Campaign in IIUM.	3.854	0.980	77.1	17.384	.000
4	I am ready to get involved with the Zero Single-Use Plastic Campaign	3.807	0.999	76.1	16.108	.000
5	I am ready to wash the metal straw every time I use it.	3.716	1.103	74.3	12.953	.000
6	I am ready to wash the re-useable container every time I use it.	3.706	1.049	74.1	13.431	.000
7	I am ready to ban plastics.	3.628	1.044	72.6	12.000	.000
8	I am ready to bring a re-useable container to put my food.	3.621	1.06	72.4	11.685	.000
9	I am ready to bring and use a metal straw everywhere I go.	3.588	1.143	71.8	10.264	.000
10	I am ready to bring a heavy bag due to the re-useable container.	3.412	1.111	68.2	7.396	.000
Overall Readiness (N = 398)		3.734	0.805	74.7	18.191	.000

*5-point Likert scale: 1 = strongly disagree (1–20%), 2 = disagree (21–40%), 3 = slightly agree (41–60%), 4 = agree (61–80%), 5 = strongly agree (81–100%)

** Test value = 3

Behaviour Towards IIUM Zero Single-Use Plastic Campaign

The behaviour of the respondents towards IIUM ZSUPC is rather low compared to the rest of the variables (Table 7), with the mean values ranging from 3.096 to 3.628. However, the overall behaviour is still significant ($t = 6.995$, $p = .000$). The two highest items are “I spend my money for a paper straw at the Cafeteria” (72.6%) and “I help my friends by carrying their stuff in order to support this campaign” (70.3%). The rest of the items are represented by six in ten respondents. The respondents spread information regarding this campaign (67.4%) by persuading friends to use eco-friendly products (66.1%) and by bringing their own plastic bags when buying something (65.6%). They also bring a plastic container (64.0%), bags for carrying things (64.0%), and their own metal straw (63.0%). They have started buying a metal straw (63.7%), and 62.0% of them prefer not to take plastic bags when buying something. Hence, it can be implied that all these actions are done towards supporting the ZSUPC. Thus, the future of IIUM ZSUPC is bright as the involvement of the campus community is high and promising.

Table 7: Usage behaviour towards IIUM zero-single use plastic campaign

No.	Behaviour Towards IIUM Zero Single-Use Plastic Campaign	<i>M*</i>	<i>SD</i>	%	<i>t**</i>	<i>p</i>
1	I spend my money on a paper straw at the Cafeteria.	3.628	1.054	72.6	11.89	.000
2	I help my friends by carrying their stuff in order to support this campaign.	3.515	1.099	70.3	9.351	.000
3	I spread the information regarding this campaign.	3.372	1.035	67.4	7.170	.000
4	I have persuaded my friends to use eco-friendly products.	3.307	1.029	66.1	5.941	.000
5	I bring my own plastic bags when buying something.	3.279	1.175	65.6	4.736	.000
6	I bring my own plastic container.	3.201	1.345	64.0	2.982	.003
7	I bring my own bags for carrying things.	3.201	1.393	64.0	2.880	.004
8	I spend my money for a set of metal straws.	3.186	1.264	63.7	2.935	.004
9	I bring my own metal straw.	3.151	1.163	63.0	2.586	.010
10	I prefer not to take plastic bags when buying something.	3.096	1.197	62.0	1.592	.112
Overall Behaviour (N = 398)		3.294	0.837	65.9	6.995	.000

* 5-point Likert scale: 1 = strongly disagree (1–20%), 2 = disagree (21–40%), 3 = slightly agree (41–60%), 4 = agree (61–80%), 5 = strongly agree (81–100%)

** Test value = 3

Hypotheses Testing

Table 8 shows the correlation and the level of significance between the dependent variable, namely, the behaviour of the IIUM community towards ZSUPC, and the independent variables which are the awareness, perception, attitude, and readiness of the IIUM community towards this campaign. The relationship between the dependent and independent variables are all positive. All the hypotheses are supported. There is a weak relationship between the awareness of the IIUM community towards IIUM Zero Single-Use Campaign and the behaviour of the IIUM community towards this campaign ($r = .327, p = .000$). There is also a moderate relationship between the perception of the IIUM community towards the campaign and the behaviour of the IIUM community ($r = .537, p = .000$). There exists a strong relationship between the attitude of the IIUM community towards this campaign and the behaviour of the IIUM community ($r = .604, p = .000$). Also, there is a very strong relationship with $r = .708 (p = .000)$ between the readiness and the behaviour of the IIUM community.

Other than that, all the independent variables are positively related to one another. There is a weak relationship between the awareness of the IIUM community towards this campaign and their perception ($r = .399, p = .000$), attitude ($r = .311, p = .000$), and readiness ($r = .308, p = .000$). However, there is a positive and strong relationship between the perception of the IIUM community and their attitude ($r = .723, p = .000$) and readiness ($r = .700, p = .000$) towards this campaign. Lastly, there is also a positive and strong relationship between the attitude of the IIUM community towards the IIUM ZSUPC and their readiness towards this campaign ($r = .783, p = .000$).

Table 8: Correlation between behaviour and factors affecting it

Variable	Behaviour	Awareness	Perception	Attitude	Readiness
Behaviour	1				
Awareness	$r = .327,$ $p = .000$	1			
Perception	$r = .537,$ $p = .000$	$r = .399,$ $p = .000$	1		
Attitude	$r = .604,$ $p = .000$	$r = .311,$ $p = .000$	$r = .723,$ $p = .000$	1	
Readiness	$r = .708,$ $p = .000$	$r = .308,$ $p = .000$	$r = .700,$ $p = .000$	$r = .783,$ $p = .000$	1

A step-wise regression analysis was performed to determine the best predictor of the behaviour towards ZSUPC. Results (Table 9) show that readiness is the first factor that appears in Model 1 with $t = 19.974, p = .000$. It explains for 50.1% of the usage behaviour. As a single variable, it has a substantial contribution towards behaviour. Model 2 reveals that awareness is the second contributor, with 1.1% only. However, both are predictors to behaviour. Therefore, readiness and awareness are the two factors determining the behaviour towards ZSUPC. Hence, the IIUM authority should work towards making the IIUM community ready to accept the campaign through awareness strategies.

Table 9: Step-wise regression analysis for behaviour and its selected variables

Model	Variable	Unstd. Coeff.		Std. Coeff.	t	p
		B	SE	Beta		
1	Constant	.542	.141		3.846	.000
	Readiness	.737	.037	.708	19.974	.000
<i>F</i> = 398.972, <i>df</i> = 1, 396, <i>p</i> = .000; <i>R</i> = .708, <i>R</i> ² = .502, <i>R</i> ² <i>Adj.</i> = .501; <i>R</i> ² <i>Change</i> = .502, <i>F</i> = <i>Change</i> = 398.972, <i>df</i> = 1, 396, <i>p</i> = .000						
2	Constant	.177	.179		0.988	.324
	Readiness	.698	.038	.671	18.229	.000
	Awareness	.142	.043	.120	3.259	.001
<i>F</i> = 209.644, <i>df</i> = 2, 395, <i>p</i> = .000; <i>R</i> = .718, <i>R</i> ² = .515, <i>R</i> ² <i>Adj.</i> = .512; <i>R</i> ² <i>Change</i> = .013, <i>F</i> = <i>Change</i> = 10.623, <i>df</i> = 1, 395, <i>p</i> = .001						

- Two variables are excluded in the equation: Perception and Attitude

- All hypotheses of the study are supported and they are line with the previous studies when participation in ZSUPC is positively related with awareness (Asmuni et al. 2015), perception (Wok et al., 2018), attitude (Wan et al., 2012; Wok et al., 2018), and readiness (Son & Han, 2011).

CONCLUSION

A total of 398 respondents participated in the study. They are mainly female Malaysians, aged 21 – 30 years old, and students. The students represent the bulk of the IIUM community.

All the hypotheses proposed in the research are supported by positive correlations between all the variables. The majority of the respondents responded positively to the campaign in terms of awareness, perception, attitude, readiness, and behaviour towards the Zero Single-Use Plastic Campaign (ZSUPC). Most of them are aware of and have good perceptions of this campaign. In addition, many of the respondents indicate that they are willing to spend money on eco-friendly products and are bringing their own containers in support of the campaign. However, some negative responses require consideration in order to improve the campaign, such as those who are not used to eco-friendly products and the respondents who request the authority to provide other alternatives before banning the plastic usage. The best predictor of the ZSUPC usage is readiness, followed by awareness and both explain for more than fifty percent of the variance in the ZSUPC participation. As such, the theory of planned behaviour is supported by the findings of the study.

This research has its own limitations. The research was conducted right after the implementation of the campaign. This would put the IIUM community in a difficult situation to change their lifestyle to comply with the policy. Thus, some of the respondents responded negatively towards the campaign, but it does not affect the findings because the number is small. In addition, most of the respondents are students, while the sample was supposed to represent the IIUM community which includes lecturers, administrative staff, and vendors. Therefore, future research should ensure that the respondents proportionately represent all categories of the IIUM community.

It is suggested that the campaign should increase its promotional and publicity methods and strategies so that more people are aware of the issue and the campaign of Zero Single-Use Plastic. Another follow-up study should be conducted to chart the progress of the campaign. Furthermore, it would be better to conduct the study in a bigger context such as among Malaysians in various states that have adopted such campaign, for example, Pulau Pinang.

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